SUPPLEMENTARY MATERIAL

Table S1:

List of areas showing prediction errors for both juice and money*	X	Y	Z	Cluster size	Z-score
Average of prediction errors					
Caudate Nucleus	-9	3	15	907[1]	4.2
Nucleus Accumbens	15	12	-6	516[2]	3.9
Conjunction of prediction errors					
Caudate Nucleus	-9	0	6	6	3.3

*Reporting only areas within striatum at p<0.001 unc., areas outside striatum reported only if surviving family wise error whole brain correction for multiple comparisons at p<0.05; clusters with an extent of less than 5 contiguous voxels are also excluded

1. Cluster extends bilaterally across dorsal striatum
2. Accumbens cluster extends contiguously into medial prefrontal cortex

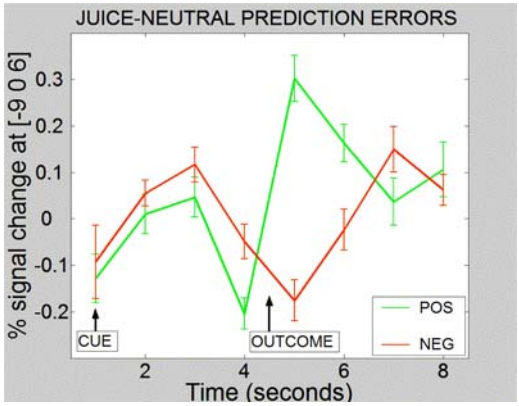
Table S2

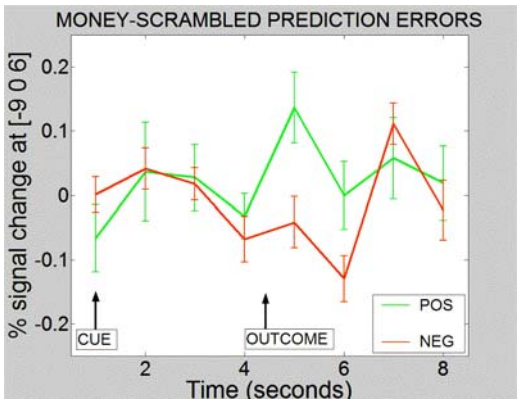
Areas showing a difference between juice and money prediction errors*	X	Y	Z	Cluster size	Z-score
Money PE > Juice PE					
Nucleus Accumbens	15	9	-6	5	3.6
Juice PE > Money PE					
Middle Occipital Cortex	-39	-66	-3	74	4.73

*Reporting only areas within striatum at p<0.001 unc., Areas outside striatum reported only if surviving family wise error whole brain correction for multiple comparisons at p<0.05; clusters with an extent of less than 5 contiguous voxels are also excluded.

Supplementary figure S1:

Time-course plots for the dorsal striatum from the conjunction of Juice-Neutral and Money-Scrambled prediction error contrast shown separately for Juice (top) and Money PEs (bottom) for visualization purposes. These plots were produced as follows: within 6 mm of the group peak for these contrasts, we located functional ROIs within each individual subject's dorsal striatum and extracted event-related responses from the peak voxel for that subject. Effects of no interest were removed except for prediction error (PE) signals for each condition. Then trials which had positive PE according to the model (higher than 0.4) were binned from each subject's time course, and so were those with negative PE (smaller than -0.4). All the trials of each type were averaged first across all trials within each subject, as well as across the two learning sessions, and finally across subjects to produce group level time courses.


JUICE-NEUTRAL PREDICTION ERRORS
% signal change at [-9 0 6]
0.3
0.2
0.1
0
-0.1
-0.2
CUE
OUTCOME
POS
NEG
2
4
6
8
Time (seconds)


MONEY-SCRAMBLED PREDICTION ERRORS
% signal change at [-9 0 6]
0.2
0.1
0
-0.1
-0.2
CUE
OUTCOME
POS
NEG
2
4
6
8
Time (seconds)